

Notice of Allowability

Application No.

10/525,939

Examiner

Timothy C. Vanoy

Applicant(s)

BAJPAI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment and Remarks filed on Feb. 13, 2007.
2. ☒ The allowed claim(s) is/are 1 and 3-47.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application
- ☒ Interview Summary (PTO-413), Paper No./Mail Date Mar. 14, 2007.
- ☒ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other _____

Timothy C Vanoy
Timothy C. Vanoy
Primary Examiner
Art Unit 1754

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicants, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Gregory Lefkowitz, applicants' attorney, on Mar. 14, 2007.

The application has been amended as follows:

In the specification on pg. 18 in paragraph no. 00061, replace "Description of Figures in the accompanying drawings:" with --Brief Description of the Drawings--.

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: The applicants' arguments presented in their Reply filed on Feb. 13, 2007 are persuasive. Some of these persuasive arguments are listed below. The chemical vapor deposition techniques used by Ivanov in the reference titled "Epitaxial growth of CrO_2 thin films by chemical-vapor deposition from Cr_8O_{21} precursor" (hereafter "Ivanov") are used to apply a thin film of material onto a substrate, not the for creation of bulk raw materials as called for the in applicants' claims. Ivanov does not disclose or suggest using heating to convert bulk CrO_3 or bulk Cr_8O_{21} into bulk CrO_2 or either of the claimed homogeneous bulk materials of CrO_2 with Cr_2O_3 or CrO_2 with Cr_2O_5 . Nowhere does Ivanov teach or suggest heating Cr_8O_{21} from room temperature to a temperature between 350 and 500

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°C. Ivanov's process deposits a thin film of CrO_2 onto a substrate, it is not capable of creating a pure bulk CrO_2 . Ivanov explicitly states "no other chromium suboxides (even CrO_2) have been observed in any XRD data from the powders we have prepared or in the literature": please see pg. 1037, 2nd column, first full paragraph, last sentence. (The applicants note that these "powders we have prepared" are CrO_3). The applicants argue in the paragraph bridging pgs. 14 and 15 in their Remarks filed on Feb. 13, 2007 that the invention set forth in their claims 1 and 25 and the claims dependent thereon is different from the state of the art in both physical properties and in the method of producing the material. None of the cited art discloses or suggests a substantially pure bulk chromium dioxide having a saturation magnetization of at least 120 emu/gm. The closest known bulk chromium dioxide is a powder produced by DuPont that exhibits a saturation magnetization of about 100 to 110 emu/gm. (see the specification at paragraph no. 0010 and also Dai, J. and Tang J. "Junction-like magnetoresistance of intergranular tunneling in field-aligned chromium dioxide powders" 54434-1 at 54434-2, 1st column).

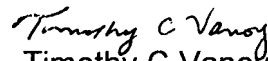
Any comments considered necessary by the applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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